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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Jesse A. Jurrens

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EXAMINER

RODRIGUEZ, PAMELA

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/753,591	Applicant(s) JURRENS, JESSE A.	
	Examiner Pam Rodriguez	Art Unit 3657	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 38-43 and 46-67 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 38-43 and 46-67 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The Amendment filed June 8, 2009 has been received and considered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 38-43 and 46-67 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,129,634 to Harris in view of U.S. Patent No. 3,603,611 to Wenham.

Regarding Claim 38, Harris discloses a suspension device (see Figure 1) capable of connecting to a frame of a vehicle and a swing arm on which a wheel of the vehicle is mounted having most all the features of the instant invention including: a housing 40 defining an interior, a shock absorber 20/30/14 mounted on the housing (see Figure 1), the shock absorber including a rod 20 movably mounted on the housing 40 (at least through its connection to element 30 and element 26) such that at least a portion of the rod 20 extends into the interior of the housing and through the housing (see Figure 1 and the lower portion of rod 20 which extends through cylinder 18 and thus also through housing portion 40), a piston 14 positioned in the interior of the housing 40 and being mounted on the rod of the shock absorber to move with the rod

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(note that the piston is readable as being mounted on rod 20 at least through element 18, see also Figure 5 of the reference), an air bag 30 positioned within the interior of the housing 40 (see Figure 1), the air bag being constructed of an elastomeric material, the air bag 30 having a first end 28 mounted on the housing in the interior of the housing at element 32 and a second end 34 mounted on the piston 14 such that the piston, the housing, and the air bag collectively define an air chamber within the housing (see Figure 1).

However, Harris does not disclose that his housing completely encloses the air bag.

Wenham is relied upon merely for his teachings of an air bag suspension system (see the Figure) forming a shock absorber 5 which includes at least one air bag, the air bag is completely enclosed within a housing assembly (see the Figure and the outer housing for the air bag of assembly 5).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the air bag suspension system of Harris to include an air bag enclosed completely within a housing assembly as taught by Wenham as an effective means of sealing the air bag from the environment. By constructing the air bag to be fully enclosed within the housing assembly, outside dirt, debris, and other such contaminants would be prevented from damaging the air bag.

Regarding Claim 39, see ends 28 and 34.

Regarding Claim 40, see flange 32 and flange 34 and column 3 lines 55-58.

Regarding Claim 41, see portion 28 which receives a portion of an end cap 26 of the housing and portion 34 receiving piston 14.

Regarding Claim 42, see Figure 1.

Regarding Claim 43, see shock absorber 18 which inherently includes a hydraulic piston and a cylinder, at least a portion of the cylinder mounted in housing 40 and the piston would inherently be mounted on rod 20, wherein the rod is certainly capable of being configured to be mounted on one element of the frame or the swing arm and the cylinder is certainly capable of being mounted on the other of the frame or swing arm.

Regarding Claims 46, 47, and 66, see Claim 38 above and note how the housing of Wenham shown in the Figure abuts against an entire circumference and entire length of the air bag, when the air bag is fully extended as shown in the figure.

Regarding Claim 48, Harris discloses that a degree of pressurization of the pressurized air in the air-bag suspension member 10 is adjustable (see column 6 lines 13-31).

Regarding Claim 49, Harris inherently discloses that the air-bag suspension member is characterized by a support spring force which is a function of compression stroke.

Regarding Claim 50, see column 6 lines 13-31 of Harris.

Regarding Claims 51 and 53, Harris, as modified, discloses most all the features of the instant invention as applied above except for the specifics of the support spring

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force being a progressive function of compression stroke or an exponential function of compression stroke.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the air bag suspension member of Harris, as modified, so that the support spring force is either a progressive function or an exponential function of compression stroke as a matter of design preference dependent upon the desired damping characteristics of the suspension system. As long as the spring force is correlated to the compression stroke to provide adequate damping to the air bag system, their relationship to one another is arbitrary.

Regarding Claim 52, see column 6 lines 13-31 of Harris, where inherently this limitation would be true.

Regarding Claims 54 and 60, see Claim 48 above.

Regarding Claims 55 and 61, see Claim 49 above.

Regarding Claims 56 and 62, see Claim 50 above.

Regarding Claims 57, 59, 63, and 65, see Claims 51 and 53 above.

Regarding Claims 58 and 64, see Claim 52 above.

Regarding Claim 67, Harris, as modified, further discloses that the piston 14 defines a cavity (see Figure 1) located opposite of the air chamber that is capable of receiving a portion of the shock absorber 18 upon compression of the suspension device (see Figure 1).

Response to Arguments

4. Applicant's arguments filed June 8, 2009 have been fully considered but they are not persuasive.

Applicant first argues that one of ordinary skill in the art would not be led to modify the Harris apparatus with aspects of the Wenham patent in the manner alleged to be obvious in the rejection. In particular, applicant states that one of ordinary skill in the art would have no motivation to completely abandon the "side acting force" that is the primary object of the Harris apparatus as disclosed in the Harris patent. Further, applicant contends that it is clear to one of ordinary skill in the art from the Abstract of Harris that the key function of the apparatus is the creation of a horizontal "side acting force" and also that the key to creating this side acting force is a "partial restraining sleeve" that "extends less than half way around the circumference of the air spring flexible member". Applicant contends that this literal and explicit discussion in the Harris patent would not reasonably lead one of ordinary skill in the art to the allegedly obvious modification of the Harris patent set forth in the rejection. In fact, applicant concludes, that one of ordinary skill in the art would read Harris as teaching against any modification of the Harris sleeve that would destroy or counteract the creation of the side acting force by the partial restraining sleeve such as by the obvious adoption of the structure of the Wenham strut, or any attempt to "completely enclose the flexible member of Harris, as this would eliminate the "side acting force" that is the crux of the Harris apparatus.

In response to this, the examiner contends that the Wenham reference is merely being relied upon to show that completely enclosing an air bag assembly within a housing is known and would provide an effective means of sealing the air bag from the environment. While the examiner recognizes that the Harris patent designs his restraining sleeve to create a side acting force, the teachings of Wenham would merely lead one of ordinary skill in the art to the conclusion that completely enclosing the air bag is a possibility and would protect the air bag assembly from dirt, debris, and other such contaminants. Contrary to applicant's remarks, the examiner does not conclude that the Wenham reference would teach away from the objective of the Harris patent, but instead provide an alternative means to better shield and protect the air bag.

Applicant next argues that the statement in the Harris patent that creation of the side load force is the object of the Harris system could only lead one of ordinary skill in the art away from the allegedly obvious modification set forth in the rejection. Applicant contends that one of ordinary skill in the art would recognize that "completely enclosing" the flexible member of the airspring, as it is set forth in the rejection that Wenham teaches, would completely eliminate this primary objective of the Harris patent and its airspring.

In response to this, the examiner is not abandoning the known solution of the air bag 30 of Harris, but rather improving upon the air bag structure itself in light of the teachings of Wenham. The fact remains that while the Harris patent may not expressly describe the need for a fully encapsulated air bag, this doesn't preclude the teachings of Wenham of such an assembly from teaching such to one of ordinary skill in the art. This

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problem addressed in the obviousness modification, while not expressly discussed in the patents themselves, is not beyond the realm of one of ordinary skill in the art to recognize. Contamination of a shock absorber air bag such as Harris' is a fact and is something usually of concern in shock absorber design. So again, while this problem addressed in the combination is not stated in the references, it doesn't mean that the problem would not exist.

Applicant then argues that the partial restraint, which is the primary and singular thrust of the Harris patent, could only lead one of ordinary skill in the art away from the modification of the Harris apparatus that is proposed in the rejection.

In response to this, applicant's attention is directed to the remarks to this effect above.

And lastly, applicant argues that, most importantly, there is nothing in Harris or Wenham that establishes to one of ordinary skill in the art that the "problems" set forth in the office action justify the abandonment of the primary purpose of the Harris apparatus in order to address them.

In response to this, the examiner is merely relying upon her knowledge of the shock absorber art to formulate her rejections. Contrary to applicant's remarks, the examiner's obviousness modification isn't without merit. The examiner contends that the problem being addressed by the asserted combination (i.e., completely enclosing the air bag within the housing) is a "problem that is addressed" by the Harris patent. Harris' air bag 30 is not completely enclosed within the housing 40 and in light of Wenham's teachings, one of ordinary skill in the art would glean that fully enclosing the air bag

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within a shock absorber housing would protect the air bag from damage incurred from its operating environment. The air bag of Harris would be susceptible to potential puncture or wear from factors such as road spray and debris and this would be a problem that could be addressed by the patent, if for no other reason, due to the structural arrangement of the Harris air bag. Therefore, the examiner maintains the problem being addressed by the asserted combination of references is a concern to the art being relied upon.

It is for these reasons that the rejections are being maintained.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pam Rodriguez whose telephone number is 571-272-7122. The examiner can normally be reached on Mondays 5:30 AM - 4 PM and Tuesdays 8 AM - 2 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rob Siconolfi can be reached on 571-272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Pam Rodriguez
Primary Examiner
Art Unit 3657

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10/05/09